

# Work Order ID 66505

Thursday, February 17, 2011 10:48:13 AM



HAI ONLY

Page 1

Item ID: D4308-042

Accept



Setup Start



Revision ID:

Item Name: Step Weldment Assembly RH

Stop



Start Date: 2/17/2011 Start Qty: 1.00



Required Date: 2/18/2011 Req'd Qty: 1.00



Cust Item ID:

Customer:

PRELIMINARY  
ISSUE

Reference:

Approvals:

Process Plan:

*mf*

Date:

11-02-17

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D4308

PA2

100

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Cut D4308-1 using D2622 extrusion as per Dwg D4308  
2-Drill, c'sink one hole on top of step as per dwg  
3-Deburr and bevel ends for welding

*PL 11-02-17* 1 *φ*

110

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

*PL 11-02-17* (1x)

120

0.00



Weld per dwg A/R Aluminum rod Batch: *M108436*  
*M115428*

Large Fab

Large Fab

Memo

0.00

Large Fab

1-Weld end cap (ONE END ONLY)  
2-Grind end cap welds flush  
3-weld lugs as per Dwg D4308

*PL 11-02-17* 1 *φ*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 66505**

Thursday, February 17, 2011 10:48:13 AM

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Item ID: D4308-042

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Setup Start

Revision ID:

Stop

Item Name: Step Weldment Assembly RH

Start Date: 2/17/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 2/18/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

1 0 BE 11/02/17

140

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

-inspector to PA2  
Dens only  
5/10/17 (CORR)

150

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

11-02-17

1 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			



**NOTE:** Date & initial all entries

# Work Order ID 66505


Thursday, February 17, 2011 10:48:13 AM


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Item ID: D4308-042	Accept		Setup	Start	
Revision ID:				Stop	
Item Name: Step Weldment Assembly RH					
Start Date: 2/17/2011	Start Qty: 1.00		Cust Item ID:		
Required Date: 2/18/2011	Req'd Qty: 1.00		Customer:		
Reference:					

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160	QC3- Inspect Part Finish	0.00							
									
QC	Memo	0.00				(1X)			
Quality Control									

170	Weld per dwg A/R Aluminum rod Batch: <u>M108436</u>	0.00							
	Large Fab								
Large Fab	Memo	0.00							
Large Fab	1-Inspect for foreign object per QSI 024								
	2-Weld Remaining end cap as per Dwg D4308								
	3-Grind end cap weld flush as per dwg D2841								
	4- install rivert as per dwg								

180	QC10- Inspect visual per QSI004- ground welds	0.00							
									
QC	Memo	0.00							
Quality Control									

⇒ m-1 11/02/17

11.02.18

11.02.18

N/A  
HAI DALL  
u

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 66505

Thursday, February 17, 2011 10:48:13 AM

Page 4

Item ID: D4308-042

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Setup Start

Revision ID:

Stop

Item Name: Step Weldment Assembly RH

Start Date: 2/17/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 2/18/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

200

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

210

Spray Painting per QSI005 4.2

0.00



SprayPaint

Memo

0.00

Spray Painting

\*\*\*BLUE\*\*\*

Powder Coat white

START 9:30  
OVEN 320°  
FINISH 10:00

1 of 11/02/25

BK 11-2-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Work Order ID 66505

Thursday, February 17, 2011 10:48:13 AM

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Setup Start

Revision ID:

Stop

Item Name: Step Weldment Assembly RH

Start Date: 2/17/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 2/18/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

215

Wing Walk as per dwg QSI005 4.4 Batch M116402 0.00



HandFinish

Memo

0.00

Hand Finishing

1 0 20 11/02/23

220

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

230

Identify as per dwg & Stock Location: Russ

0.00



Packaging

Memo

0.00

Packaging

W 11-02-24

FAI ONLY NOT FOR SALE 01700 W 11-02-24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 66505**

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Setup Start



Revision ID:

Stop



Item Name: Step Weldment Assembly RH

Start Date: 2/17/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/18/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

240

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, February 17, 2011 10:48:10 AM

Page 1

Work Order ID: 66505

Parent Item: D4308-042

Parent Item Name: Step Weldment Assembly RH





Start Date: 2/17/2011

Required Date: 2/18/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 11.01.07 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2622-120 		Manufactured	No			100	Each	0.0000	0.05	0.052632			
Step Extrusion													
D2734 		Manufactured	No			120	Each	43.0000	1	1			
Step End Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				43					
				62931				43					
D2734 		Manufactured	No			170	Each	43.0000	1	1			
Step End Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				43					
				62931				43					
D3458-1 		Manufactured	No			120	Each	62.0000	1	1			
Step Mounting Plate													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				WA				62					
				51239				3					
				63075				59					

11.02.17 364409

11.02.17

11.02.17

11.02.17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, February 17, 2011 10:48:10 AM

Page 2

Work Order ID: 66505



Parent Item: D4308-042



Parent Item Name: Step Weldment Assembly RH

Start Date: 2/17/2011

Required Date: 2/18/2011

Start Qty: 1.00

Required Qty: 1.00

D3458-3

Manufactured No

120

Each

65.0000

1

1



Step Mounting Plate



*11-02-17*

Location

Loc Qty

Loc Code

WA

65

62683

15

63076

50

*1*

MS80601AD4W2 X 1

*B\* m114945*

*mk 11-02-17*

*11-02-17* (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

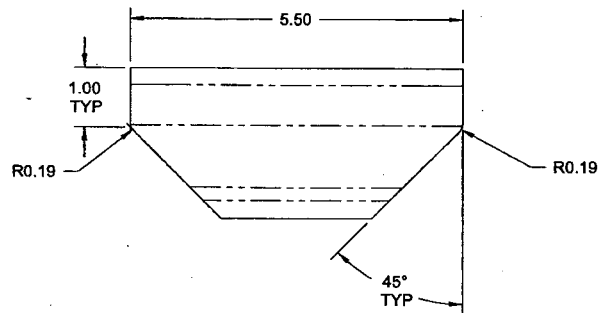
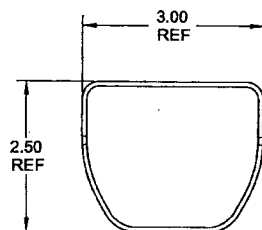
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





**D4308-1 STEP**

#66505

**PRELIMINARY ISSUE**

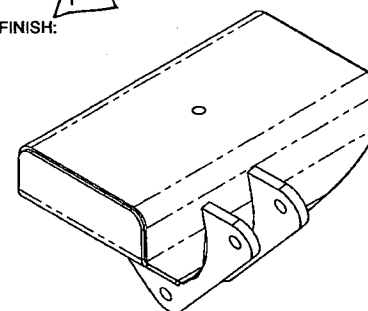
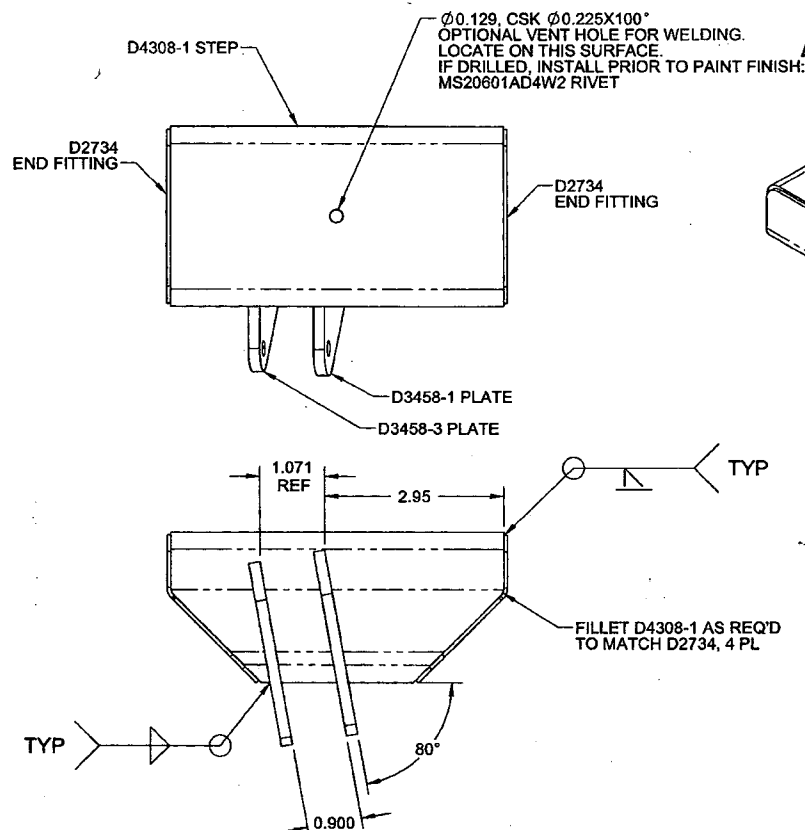
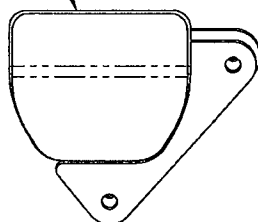
Rev PAZ CP 11.01.13

- NOTES:**
- 1) MATERIAL: MAKE FROM D2622 EXTRUSION
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: NONE
  - 7) WEIGHT: 0.33 lbs

DESIGN	CP	<b>DART AEROSPACE LTD</b>	
DRAWN	CP	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		<b>D4308</b>	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		<b>STEP, CREW</b>	NTS
DATE	<b>10.12.17</b>	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D4308-041	STEP, LH CREW
2	1	D4308-1	STEP
3	2	D2734	END PLATE
4	1	D3458-1	PLATE
5	1	D3458-3	PLATE
6	1	MS20601AD4W2	RIVET (OPTIONAL)

APPLY BLACK  
ANTI-SKID ON TOP  
SURFACE TO BOTTOM  
OF TOP RADIUS



### D4308-041 STEP, LH CREW

#### NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4308-041" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.47 lb
- 8) WELDING: PER DART QSI 004

PRELIMINARY ISSUE

Rev PAZ 11.01.13

PAZ	ADD WING-WALK, VENT HOLE	11.01.13
A	NEW ISSUE	10.12.17
REV.	DESCRIPTION	BY DATE
DESIGN	GP	
DRAWN	GP	
CHECKED		
MFG. APPR.		
APPROVED		
DE APPR.		
DATE	10.12.17	

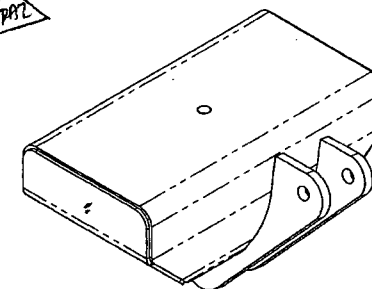
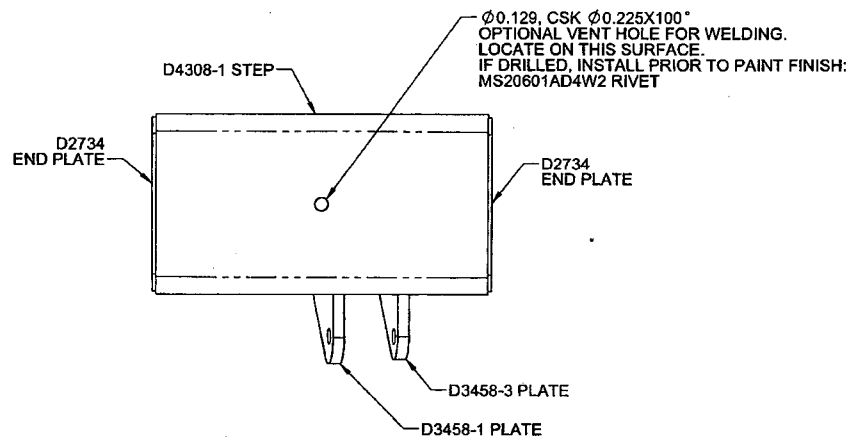
**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.  
**D4308**

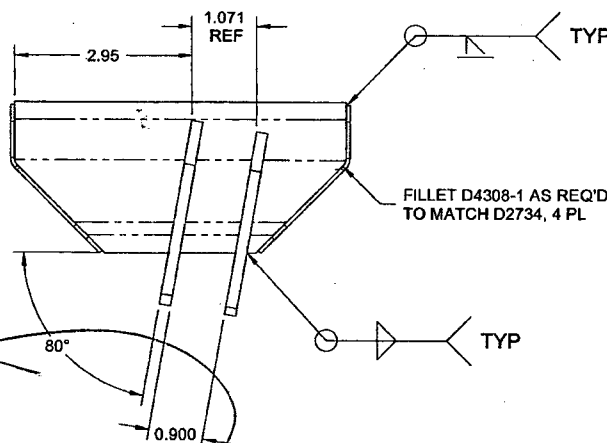
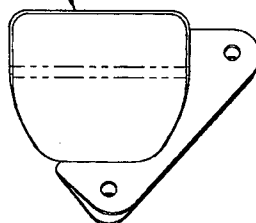
TITLE  
**STEP, CREW**

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ITEM	QTY -042	P/N	DESCRIPTION
1	X	D4308-042	STEP, RH CREW
2	1	D4308-1	STEP
3	2	D2734	END PLATE
4	1	D3458-1	PLATE
5	1	D3458-3	PLATE
6	1	MS20601AD4W2	RIVET (OPTIONAL)



APPLY BLACK  
ANTI-SKID ON TOP  
SURFACE TO BOTTOM  
OF TOP RADIUS



**D4308-042 STEP, RH CREW**

#### NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4308-042" AND B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.47 lbs
- 8) WELDING: PER DART QSI 004

**PRELIMINARY ISSUE**

Ra PAL 11.01.13

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. <b>D4308</b>	REV. A
MFG. APPR.			SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		<b>STEP, CREW</b>	NTS
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